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Bibliography

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[Judge] Sato Nobuo

(56) [Bibliography]

[References] Provisional publication of a patent Common [3-108286 (JP, A)]

[References] Provisional publication of a patent Common [4-229965 (JP, A)]

[References] The real open Showa 63-160683 (JP, U)

[References] The real open Common [6-77178 (JP, U)]

[References] ** table Common [6-507264 (JP, A)]

(58) [The investigated field] (Int.Cl.6, DB name)

H01R 13/56 - 13/72

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CLAIMS

(57) [Utility model registration claim]

[Claim 1] Latch equipment with which the whole was formed in the shape of abbreviation for U characters, and the latch section and the latch release section which carry out latch engagement of the child substrate were prepared for the 1st Kataue of two pieces which carry out abbreviation opposite of inside, In the edge connector which consists of housing which has the hold room of this latch equipment In case [of the extension wire of the 1st aforementioned piece] it arranges to an outside and the inside, respectively and the aforementioned latch release section is operated, the contact section with the wall of the aforementioned hold room of the 1st aforementioned piece is used as the supporting point for the

aforementioned latch section and the aforementioned latch release section. The edge connector characterized by rotating in the direction in which the 1st aforementioned piece is twisted, and the latch engagement to the aforementioned child substrate separating by this twist.

[Claim 2] Latch equipment with which the whole was formed in the shape of abbreviation for U characters, and the latch section and the latch release section which carry out latch engagement of the child substrate were prepared for the 1st Kataue of two pieces which carry out abbreviation opposite of inside, In the edge connector which consists of housing which has the hold room of this latch equipment The circular section inscribed in the circular notch formed between the 1st aforementioned piece and the aforementioned latch section at the side edge of the aforementioned child substrate is prepared. The edge connector carried out [that the aforementioned latch section carries out latch engagement with the whole surface of the aforementioned child substrate, and the aforementioned circular section is inscribed in the aforementioned notch after the aforementioned latch section overcomes the aforementioned notch, in case the aforementioned child substrate rotates and the aforementioned connector is equipped, and] as the feature.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed explanation of a design]

[0001]

[Industrial Application] This design is related with card edge KONEKUKU which has an edge connector and latch equipment with easy release of latch engagement of the substrate especially inserted in an edge connector.

[0002]

[Description of the Prior Art] The edge connector which interconnects a child substrate and mother substrates, such as SIMM (single in-line memory module), is

used for devices, such as a personal computer, from the former. In order that a child substrate falls out and may not come out while in use, as for this edge connector, it is common to have latch equipment which carries out latch engagement with a child substrate. Drawing 6 is drawing showing an example of the latch equipment (refer to JP,3-108286,A). The whole is formed in the shape of abbreviation for U characters, and this latch equipment 100 has the latch section 106 and the latch release section 108 in 1 piece 104 of the two pieces 102 and 104 which counter. This latch equipment 100 is held at connector housing (not shown) so that the shaft may intersect perpendicularly to a mother substrate (not shown). In order to cancel engagement of a child substrate (not shown) and the latch section 106, the direct control of the latch section 106 is carried out, or press operation of the slant face of the latch release section 108 is carried out with a tool or a finger from the upper part of drawing.

[0003]

[The technical problem which should be solved] Above-mentioned latch equipment is effective when used for the edge connector which carries out an abbreviation rectangular cross to a mother substrate, and holds a child substrate. However, when used for a mother substrate and the connector of the low back structure of holding a child substrate to abbreviation parallel, there is the following problem. That is, since the direction of latch release operation becomes a mother substrate (or child substrate) and abbreviation parallel, when especially an edge connector is formed in the low back, there is a problem that latch release operation is very difficult. In addition, it is [that latch engagement is canceled easily] visible if this slant face is pressed from the direction which intersects perpendicularly with a child substrate using the slant face of the latch section 106. However, if latch section 106 the very thing is pressed directly, since engagement in a child substrate and the latch section 106 will become still stronger, release of latch engagement is not easy in fact.

[0004] Moreover, only the latch section 106 engages with the whole surface of a child substrate, and above-mentioned latch equipment prevents defluxion of the child substrate from an edge connector. For this reason, there is a problem of being easy to be generated with [which met between a child substrate and latch equipment (or connector housing) at the whole surface of a child substrate / of a direction] backlash.

[0005] Therefore, this design aims at offering the edge connector which has latch equipment which can perform release of latch engagement easily.

[0006] Moreover, this design sets it as another purpose to offer the edge connector which has latch equipment which prevents with [with a child substrate] backlash at the time of wearing of a child substrate.

[0007]

[Means for Solving the Problem] The latch equipment with which the latch section and the latch release section to which the whole is formed in the shape of abbreviation for U characters, and, as for the edge connector concerning a claim 1,

carries out latch engagement of the child substrate at the 1st Kataue of two pieces which carry out abbreviation opposite of inside were prepared, In the edge connector which consists of housing which has the hold room of this latch equipment In case [of the extension wire of the 1st aforementioned piece] it arranges to an outside and the inside, respectively and the aforementioned latch release section is operated, the contact section with the wall of the aforementioned hold room of the 1st aforementioned piece is used as the supporting point for the aforementioned latch section and the aforementioned latch release section. It rotates in the direction in which the 1st aforementioned piece is twisted, and is characterized by the latch engagement to the aforementioned child substrate separating by this twist. [0008] The latch equipment with which the latch section and the latch release section to which the whole is formed in the shape of abbreviation for U characters, and, as for the edge connector concerning a claim 2, carries out latch engagement of the child substrate at the 1st Kataue of two pieces which carry out abbreviation opposite of inside were prepared, In the edge connector which consists of housing which has the hold room of this latch equipment The circular section inscribed in the circular notch formed between the 1st aforementioned piece and the aforementioned latch section at the side edge of the aforementioned child substrate is prepared. In case the aforementioned child substrate rotates and the aforementioned connector is equipped, after the aforementioned latch section overcomes the aforementioned notch, it carries out that the aforementioned latch section carries out latch engagement with the whole surface of the aforementioned child substrate, and the aforementioned circular section is inscribed in the aforementioned notch as the feature.

[0009]

[Example] Hereafter, the suitable example of the edge connector which has latch equipment of this design is explained with reference to an accompanying drawing. Drawing 1 shows one example of the latch equipment used for the edge connector of this design, and is the (A) plan, the (B) side elevation, and (C) front view. However, the part is omitted in (C) front view.

[0010] latch equipment 10 — metal plates, such as stainless steel, — punching and the 1st which carry out bending, are formed and carry out abbreviation opposite — piece 12 — and it has 14 [piece / 2nd] and the whole is formed in the shape of abbreviation for U characters The 1st piece of the projected parts 16 and 16 for carrying out pressing engagement into the hold room 46 of the connector housing 40 (refer to drawing 2) is formed upward in 12. Moreover, the fixed piece 18 which fixes the connector housing 40 to a mother substrate has extended toward an outside by making solder connection with a mother substrate (not shown). The 2nd piece of the latch section 20 which carries out latch engagement with the child substrate 60 (refer to drawing 5) is formed in the upper part in drawing 1 (C) of the center of abbreviation of 14. In order to make into the minimum damage done to taper side 20a for making insertion of the child substrate 60 easy at this latch section 20, and

a child substrate, arc-shaped marginal 20b is formed, respectively. The 2nd piece of the circular sections 22 and 24 which contact the circular notch 62 of the side edge of the child substrate 60 is formed between 14 and the latch section 20. Although the radius of curvature of the circular sections 22 and 24 is smaller than that of the circular notch 62, since the two circular sections 22 and 24 collaborate and it is inscribed in the circular notch 62, the backlash between a child substrate and the circular sections 22 and 24 is prevented. 14 extends to the inner direction (1st piece 12 side), and the 2nd piece of the latch release section 26 prolonged in the slanting upper part is formed in the free edge. Curved-surface 26a for injury prevention of an operator is formed in the circumference of the latch release section 26.

[0011] Drawing 2 is some plans showing the edge connector which has latch equipment of drawing 1. Drawing 3 is some expansion front view of the connector of drawing 2. Drawing 4 is a cross section in alignment with line IV-IV of drawing 3. Drawing 5 is a plan of a child substrate inserted in the edge connector of drawing 2. An edge connector 30 consists of two kinds of contacts 32 and 34 in which the whole which consists of a contact hold field 44 which connects the guide frames 42 and 42 (only a left end is illustrated) and these guide frames 42 and 42 of right-and-left ends is held in the housing 40 of the typeface of abbreviation KO, and the contact hold field 44, and latch equipment 10 with which it holds in the hold room 46 of each guide frame 42.

[0012] In the no-load state by which latch equipment 10 is shown in drawing 1, although it reaches 1st piece 12 and 14 [piece / 2nd] is not parallel, since 14 / piece / 2nd] will engage with the extended wall 48 of the hold room 46 if it holds in the hold room 46, it reaches 1st piece 12 and 14 / piece / 2nd] becomes parallel. This state means that the pulley load is impressed to latch equipment 10. Since the circular sections 22 and 24 of latch equipment are energized so that the circular notch 62 of the child substrate 60 with which the connector 30 was equipped may always be contacted for this reason, it is prevented with backlash. Simultaneously, the omission of the child substrate 60 or omission which met the principal plane (field of an up-and-down large area) of the child substrate 60 in a wearing state by the circular notch 62 and engagement of the circular sections 22 and 24 is also prevented.

[0013] The nose of cam 64 of the child substrate 60 is inserted in the crevice 50 of the contact hold field 44 from the slanting upper part, and if the child substrate 60 is rotated so that it may become a mother substrate and parallel, the circular notch 62 and taper side 20a of the latch section 20 will be engaged. Then, if the elasticity of latch equipment 10 is resisted and 14 [piece / 2nd] is sagged to the left of drawing 3, the circular notch 62 will overcome the latch section 20, and the child substrate 60 will carry out latch engagement with the latch section 20. The circular notch 62 and the circular sections 22 and 24 are engaged as above-mentioned in the case of this latch engagement. It is not necessary to carry out alignment of the circular notch 62, the latch section 20, and the circular notch 62 and the circular sections

22 and 24 individually by arrangement that the 2nd piece of the circular sections 22 and 24 is formed between 14 and the latch section 20. For this reason, if only the position of the circular notch 62 suits to the latch section 20, latch engagement of the child substrate 60 and backlash prevention of the child substrate 60 are easily attained by a series of rotation operations of the child substrate 60.

[0014] In order to cancel latch engagement of the child substrate 60, the latch engagement section 20 is usually moved to latch a non-engaged position from a latch engagement position by pressing the latch release section 26 in the direction of A of drawing 3. However, about this design, even if it presses the latch release section 26 for the following reasons in the direction of B or the direction of C of drawing 3, latch engagement can be canceled. drawing 1 -- setting -- the 2nd -- the extension wire E of piece 14 -- receiving -- the latch section 20 -- an outside (right-hand side) -- moreover, the latch release section 26 is arranged inside (left-hand side) For this reason, by using the lobe 28 of 14 as the supporting point, it is twisted and 14 [piece / 2nd / piece / 2nd] is rotated to the counterclockwise rotation in drawing 3 which contacts the base of the hold room 46 of housing 40. Therefore, if the press force of having a downward component is impressed to the latch release section 26, since the latch release section 26 and the latch section 20 will move to the position shown according to a two-dot chain line, respectively, the latch engagement to the child substrate 60 shown with a dashed line is canceled. In addition, that the housing portion which supports it does not exist in the latch release section 26 bottom also makes easy the variation rate of the latch release section 26.

[0015] In drawing 4, the bottom contact 32 and bottom contact 34 are arranged alternately, respectively (stagger arrangement), and are held in the contact hold field 44. Both differ in the elastic arms 32c and 34c and the attaching parts 32d and 34d, although Bases 32a and 34a and the TAIN sections 32b and 34b are common configurations. Furthermore, the positions of the contacts 32e and 34e in contact with each of the electric conduction pads 66a and 66b (only 66a is illustrated) of each field of the child substrate 60 differ in the longitudinal direction of drawing 4. For this reason, the child substrate 60 of which latch engagement was canceled receives a couple by the contacts 32e and 34e from which a position differs, and as shown by the two-dot chain line, the back end side (left-hand side) of the child substrate 60 is raised. Therefore, removal of the child substrate 60 can be easily performed after release of latch engagement.

[0016]

[Effect of the Device] According to the edge connector concerning a claim 1, the latch section of latch equipment on the outside of the extension wire of the 1st piece Since the latch release section of latch equipment is arranged inside the extension wire of the 1st piece, respectively, it rotates in the direction in which the 1st piece is twisted in the case of operation of the latch release section and latch engagement separates by this twist Only from a direction parallel to a child

substrate, release of latch engagement of a child substrate can carry out easily also from a direction perpendicular to a child substrate. Therefore, in applying to the edge connector of the low back structure which receives a child substrate especially to a mother substrate and parallel, removal of a child substrate becomes easy.

[0017] According to the edge connector concerning a claim 2, between the 1st piece and the latch sections of latch equipment The circular section inscribed in the circular notch formed in the side edge of a child substrate is prepared. Since it constituted so that the latch section might carry out latch engagement with the whole surface of a child substrate and the circular section might be inscribed in a notch after the latch section overcame the notch in case a child substrate rotated and a connector was equipped While preventing the backlash and the omission of a direction which met the principal plane of a child substrate at the time of wearing of a child substrate, if only the position of a notch suits to the latch section, latch engagement of a child substrate and backlash prevention of a child substrate are easily attained by a series of rotation operations of a child substrate.

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] One example of the latch equipment used for the edge connector of this design is shown, and they are the (A) plan, the (B) side elevation, and (C) front view, respectively.

[Drawing 2] They are some plans showing the edge connector of this design.

[Drawing 3] They are some front view showing the edge connector of drawing 2 .

[Drawing 4] It is the cross section which met the IV-IV line of drawing 3 .

[Drawing 5] It is the plan of a child substrate inserted in the edge connector of drawing 2 .

[Drawing 6] It is drawing showing the latch equipment of the conventional example.

[Description of Notations]

10 Latch Equipment
12 1st Piece
14 2nd Piece
20 Latch Section
22 24 Circular section
26 Latch Release Section
30 Edge Connector
40 Housing
46 Hold Room
60 Child Substrate
62 Notch

[Translation done.]

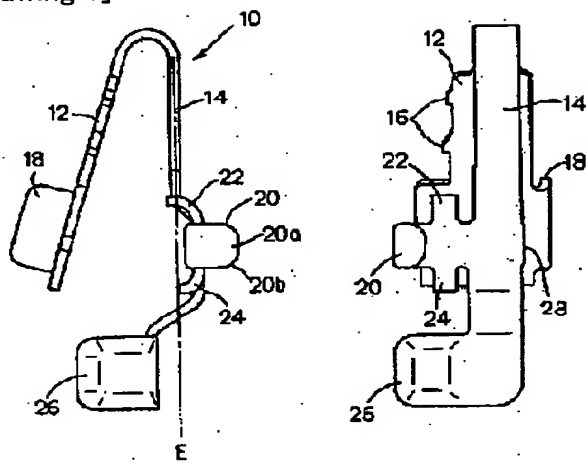
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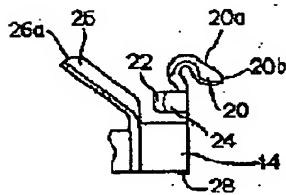
DRAWINGS

[Drawing 1]



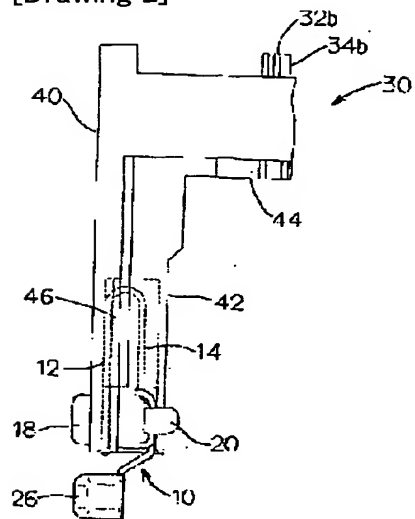
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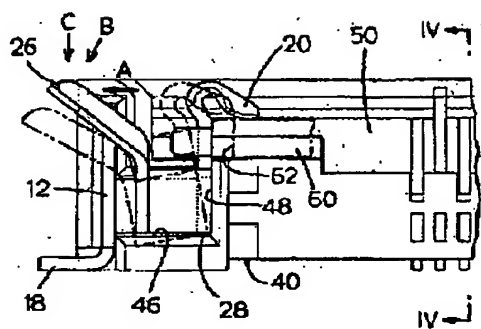


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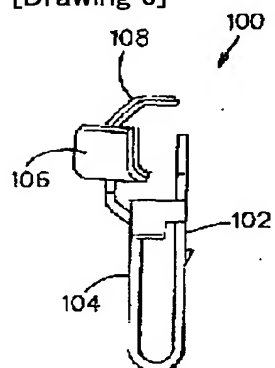
[Drawing 2]



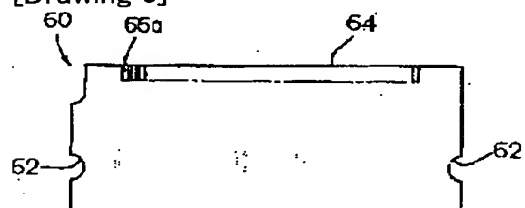
[Drawing 3]



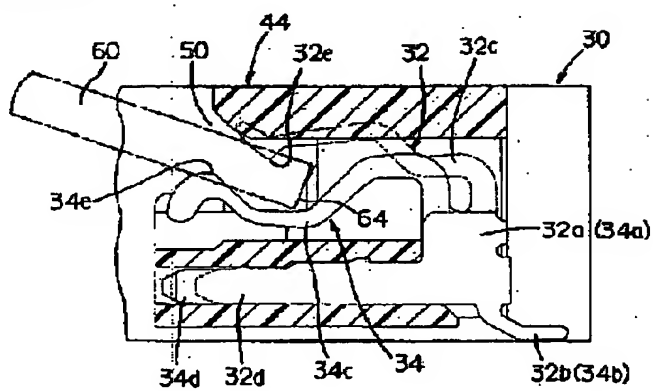
[Drawing 6]



[Drawing 5]



[Drawing 4]



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(22)出願日	平成5年(1993) 5月31日	日本エー・エム・ピー株式会社
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(54)【考案の名称】 カードエッジコネクタ

1

(57)【実用新案登録請求の範囲】

【請求項1】 全体が略U字状に形成され、略対向する2片のうちの第1片上に、子基板をラッチ係合するラッチ部及びラッチ解除部が設けられたラッチ装置と、該ラッチ装置の収容室を有するハウジングとからなるカードエッジコネクタにおいて、

前記ラッチ部及び前記ラッチ解除部を前記第1片の延長線のそれぞれ外側及び内側に配置し、

前記ラッチ解除部を操作する際に、前記第1片の前記収容室の内壁との当接部を支点として、前記第1片が振じれる方向に回動し、この振じれにより前記子基板とのラッチ係合が外れることを特徴とするカードエッジコネクタ。

【請求項2】 全体が略U字状に形成され、略対向する2片のうちの第1片上に、子基板をラッチ係合するラッチ

2

部及びラッチ解除部が設けられたラッチ装置と、該ラッチ装置の収容室を有するハウジングとからなるカードエッジコネクタにおいて、

前記第1片と前記ラッチ部との間に、前記子基板の側縁に形成された円弧状の切欠に内接する円弧状部を設け、前記子基板が回動されて前記コネクタに装着される際に、前記ラッチ部が前記切欠を乗り越えた後に、前記ラッチ部が前記子基板の一面とラッチ係合し且つ前記円弧状部が前記切欠に内接することを特徴とするカードエッジコネクタ。

【考案の詳細な説明】

【0001】

【産業上の利用分野】 本考案は、カードエッジコネクタ、特に、カードエッジコネクタに挿入される基板のラッチ係合の解除が容易なラッチ装置を有するカードエ

ジコネクタに関する。

【0002】

【従来の技術】SIMM（シングル・インライン・メモリ・モジュール）等の子基板と母基板とを相互接続するカードエッジコネクタがパーソナルコンピュータ等の機器に従来から用いられている。このカードエッジコネクタは、使用中に子基板が抜け出ないために子基板とラッチ係合するラッチ装置を具えるのが一般的である。図6は、そのラッチ装置の一例を示す図である（特開平3-108286号公報参照）。このラッチ装置100は、全体が略U字状に形成され、対向する2片102、104のうちの1片104にラッチ部106及びラッチ解除部108を有する。このラッチ装置100はその軸が母基板（図示せず）に対して直交するようにコネクタハウジング（図示せず）に保持される。子基板（図示せず）及びラッチ部106の係合を解除するには、ラッチ部106を直接操作するか、あるいはラッチ解除部108の斜面を図の上方から工具又は指で押圧操作する。

【0003】

【解決すべき課題】上述のラッチ装置は、母基板に対して略直交して子基板を保持するカードエッジコネクタに用いられる場合に有効である。しかし、母基板と略平行に子基板を保持する低背構造のコネクタに用いられる場合に次の問題がある。即ち、ラッチ解除操作の方向は母基板（又は子基板）と略平行になるので、特にカードエッジコネクタが低背に形成された場合、ラッチ解除操作が非常に困難であるという問題がある。尚、ラッチ部106の斜面を利用して、この斜面を子基板と直交する方向から押圧すればラッチ係合を容易に解除できそうに見える。しかし、ラッチ部106自体を直接押圧すると、子基板とラッチ部106との係合が更に強くなるので、実際にはラッチ係合の解除は容易ではない。

【0004】また、上述のラッチ装置は、ラッチ部106のみが子基板の一面と係合してカードエッジコネクタからの子基板の脱落を防止する。このため、子基板及びラッチ装置（又はコネクタハウジング）間に子基板の一面に沿った方向のガタつきが生じ易いという問題がある。

【0005】従って、本考案は、ラッチ係合の解除が容易にできるラッチ装置を有するカードエッジコネクタを提供することを目的とする。

【0006】また、本考案は、子基板の装着時に子基板とのガタつきを防止するラッチ装置を有するカードエッジコネクタを提供することを別の目的とする。

【0007】

【課題を解決するための手段】請求項1に係るカードエッジコネクタは、全体が略U字状に形成され、略対向する2片のうちの第1片上に、子基板をラッチ係合するラッチ部及びラッチ解除部が設けられたラッチ装置と、該ラッチ装置の収容室を有するハウジングとからなるカー

ドエッジコネクタにおいて、前記ラッチ部及び前記ラッチ解除部を前記第1片の延長線のそれぞれ外側及び内側に配置し、前記ラッチ解除部を操作する際に、前記第1片の前記収容室の内壁との当接部を支点として、前記第1片が据じれる方向に回動し、この据じれにより前記子基板とのラッチ係合が外れることを特徴とする。

【0008】請求項2に係るカードエッジコネクタは、全体が略U字状に形成され、略対向する2片のうちの第1片上に、子基板をラッチ係合するラッチ部及びラッチ解除部が設けられたラッチ装置と、該ラッチ装置の収容室を有するハウジングとからなるカードエッジコネクタにおいて、前記第1片と前記ラッチ部との間に、前記子基板の側縁に形成された円弧状の切欠に内接する円弧状部を設け、前記子基板が回動されて前記コネクタに装着される際に、前記ラッチ部が前記切欠を乗り越えた後に、前記ラッチ部が前記子基板の一面とラッチ係合し且つ前記円弧状部が前記切欠に内接することを特徴とする。

【0009】

【実施例】以下、本考案のラッチ装置を有するカードエッジコネクタの好適実施例について添付図面を参照して説明する。図1は、本考案のカードエッジコネクタに用いられるラッチ装置の一実施例を示し、（A）平面図、（B）側面図、（C）正面図である。但し、（C）正面図においては一部省略してある。

【0010】ラッチ装置10は、ステンレス鋼等の金属板を打ち抜き及び曲げ加工して形成され、略対向する第1片12及び第2片14を有し、全体が略U字状に形成されている。第1片12にはコネクタハウジング40（図2参照）の収容室46内に圧入係合するための突部16、16が上向きに形成されている。また、母基板（図示せず）と半田接続することによりコネクタハウジング40を母基板に固定する固定片18が外側に向かって延出している。第2片14の略中央の図1（C）における上方には、子基板60（図5参照）とラッチ係合するラッチ部20が形成されている。このラッチ部20には子基板60の挿入を容易にするためのテーパ面20a、子基板に与える損傷を最小限にするために弧状の縁20bがそれぞれ形成されている。第2片14及びラッチ部20の間には、子基板60の側縁の円弧状切欠62と当接する円弧状部22、24が設けられている。円弧状部22、24の曲率半径は円弧状切欠62のそれより小さいが、2つの円弧状部22、24が協働して円弧状切欠62に内接するので、子基板と円弧状部22、24との間のガタが防止される。第2片14は内方（第1片12側）に延出し、その自由端部に斜め上方に延びるラッチ解除部26が形成される。ラッチ解除部26の周囲には作業者のけが防止のための曲面26aが形成されている。

【0011】図2は、図1のラッチ装置を有するカード

エッジコネクタを示す平面図の一部である。図3は、図2のコネクタの拡大正面図の一部である。図4は、図3の線ⅠⅤ-ⅠⅤに沿った断面図である。図5は、図2のカードエッジコネクタに挿入される子基板の平面図である。カードエッジコネクタ30は、左右両端のガイドフレーム42、42（左端のみ図示）及びこれらガイドフレーム42、42を連結するコンタクト収容領域44からなる全体が略コの字形のハウジング40と、コンタクト収容領域44に収容される2種類のコンタクト32、34と、各ガイドフレーム42の収容室46に収容されるラッチ装置10とから構成される。

【0012】ラッチ装置10は、図1に示される無負荷の状態では第1片12及び第2片14が平行ではないが、収容室46内に収容されると第2片14が収容室46の延長壁48と係合するので第1片12及び第2片14が平行になる。この状態はラッチ装置10にプリロードが印加されていることを意味する。このため、特にコネクタ30に装着された子基板60の円弧状切欠62に常に当接するようにラッチ装置の円弧状部22、24が付勢されるので、ガタつきが防止される。同時に、円弧状切欠62及び円弧状部22、24の係合により、装着状態における子基板60の主面（上下の大面积の面）に沿った子基板60の抜け又は脱落も防止される。

【0013】子基板60の先端64を斜め上方からコンタクト収容領域44の凹部50に挿入し、母基板と平行になるように子基板60を回動させると、円弧状切欠62とラッチ部20のテーパ面20aとが係合する。続いてラッチ装置10の弾性に抗して第2片14を図3の左方に撓ませると、円弧状切欠62がラッチ部20を乗り越え、子基板60がラッチ部20とラッチ係合する。このラッチ係合の際、上述の通り、円弧状切欠62と円弧状部22、24とが係合する。円弧状部22、24が第2片14及びラッチ部20の間に設けられているという配置により、円弧状切欠62とラッチ部20、及び円弧状切欠62と円弧状部22、24を個別に位置合わせする必要はない。このため、円弧状切欠62がラッチ部20に位置が合いさえすれば子基板60のラッチ係合及び子基板60のガタ防止が子基板60の一連の回動操作によって容易に達成される。

【0014】子基板60のラッチ係合を解除するには、通常、図3のA方向にラッチ解除部26を押圧することによりラッチ係合部20をラッチ係合位置からラッチ非係合位置へ移動させる。しかし、本考案では以下の理由により図3のB方向乃至C方向にラッチ解除部26を押圧してもラッチ係合を解除することができる。図1において、第2片14の延長線Eに対して、ラッチ部20は外側（右側）に、又、ラッチ解除部26は内側（左側）に配置されている。このため、ハウジング40の収容室46の底面と当接する第2片14の突出部28を支点として、第2片14が捩じれて図3における反時計回りに

回動する。従って、ラッチ解除部26に下向きの成分を有する押圧力が印加されると、ラッチ解除部26及びラッチ部20は2点鎖線で示される位置にそれぞれ移動するので、1点鎖線で示される子基板60とのラッチ係合が解除される。尚、ラッチ解除部26の下側にそれを支持するハウジング部分が存在しないこともラッチ解除部26の変位を容易にしている。

【0015】図4において、上側コンタクト32及び下側コンタクト34はそれぞれ1つおきに配置（スタガ配置）されコンタクト収容領域44に収容されている。両者は、基部32a、34a及びタイン部32b、34bが共通の形状であるが、弾性アーム32c、34c及び被保持部32d、34dにおいて異なる。さらに、子基板60の各面の導電パッド66a、66b（66aのみ図示）のそれぞれに接触する接点32e、34eの位置が図4の左右方向に異なる。このため、ラッチ係合が解除された子基板60は位置の異なる接点32e、34eによって偶力を受け、2点鎖線で示されるように子基板60の後端側（左側）が持ち上がる。従って、ラッチ係合の解除後、子基板60の取り外しが容易にできる。

【0016】

【考案の効果】請求項1に係るカードエッジコネクタによれば、ラッチ装置のラッチ部を第1片の延長線の外側に、ラッチ装置のラッチ解除部を第1片の延長線の内側にそれぞれ配置し、ラッチ解除部の操作の際に第1片が捩じれる方向に回動し、この捩じれによりラッチ係合が外れるので、子基板のラッチ係合の解除が子基板と平行な方向からのみならず、子基板に垂直な方向からも容易に行うことができる。従って、特に母基板と平行に子基板を受容する低背構造のカードエッジコネクタに適用する場合には、子基板の取り外しが容易になる。

【0017】請求項2に係るカードエッジコネクタによれば、ラッチ装置の第1片とラッチ部との間に、子基板の側縁に形成された円弧状の切欠に内接する円弧状部を設け、子基板が回動されてコネクタに装着される際に、ラッチ部が切欠を乗り越えた後に、ラッチ部が子基板の一面とラッチ係合し且つ円弧状部が切欠に内接するように構成したので、子基板の装着時に子基板の主面に沿った方向のガタ付き及び抜けを防止すると共に、切欠がラッチ部に位置が合いさえすれば子基板のラッチ係合及び子基板のガタ防止が子基板の一連の回動操作によって容易に達成される。

【図面の簡単な説明】

【図1】本考案のカードエッジコネクタに用いられるラッチ装置の一実施例を示し、それぞれ（A）平面図、（B）側面図、（C）正面図である。

【図2】本考案のカードエッジコネクタを示す平面図の一部である。

【図3】図2のカードエッジコネクタを示す正面図の一部である。

【図4】図3のⅠⅤ-ⅠⅤ線に沿った断面図である。

【図5】図2のカードエッジコネクタに挿入される子基板の平面図である。

【図6】従来例のラッチ装置を示す図である。

【符号の説明】

10 ラッチ装置

12 第1片

14 第2片

* 20 ラッチ部

22、24 円弧状部

26 ラッチ解除部

30 カードエッジコネクタ

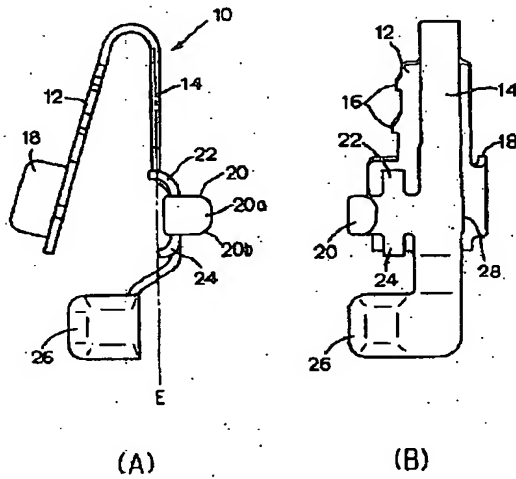
40 ハウジング

46 収容室

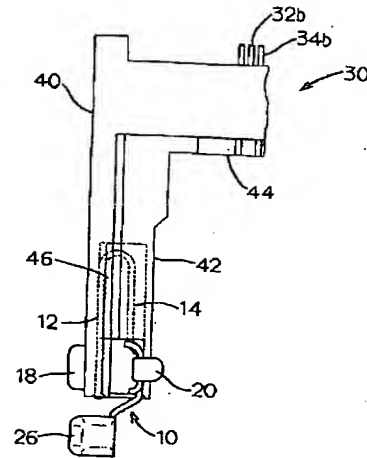
60 子基板

* 62 切欠

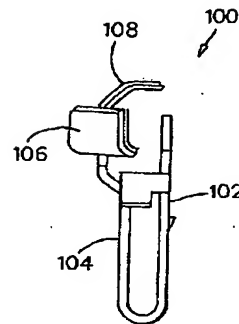
【図1】



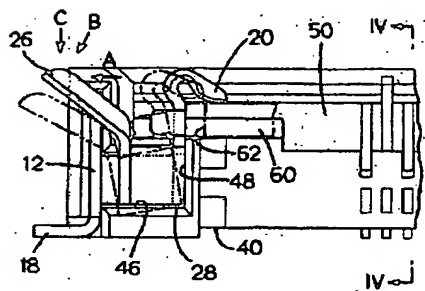
【図2】



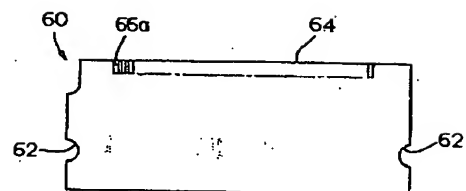
【図6】



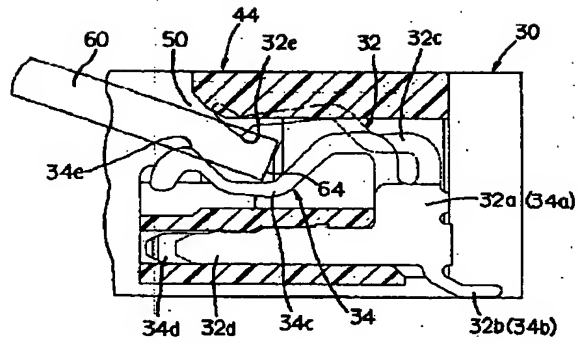
【図3】



【図5】



【図4】



フロントページの続き

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 特表 平6-507264 (J P, A)

(58)調査した分野(Int.Cl.⁶, D B名)

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